REMARKS

Examiner Toniae M. Thomas is thanked for the thorough examination and search of the subject of the patent application. Previously presented claims **1, 3 – 8** have been amended.

Reconsideration of rejection of claims **1 – 3**, and **6** under 35 U.S.C 102 (b) as being anticipated by Houlihan et al. and of claims **4** and **5** under 35 U.S.C. 103 (a) as being unpatentable over Houlihan et al. is requested based on the amendments to said claims and clarifications:

Amending the phrases in the above amended claims **1, 3 – 8** by adding ***"blanket"*** to implantation clarifies and makes the claimed invention patentable over Houlihan.

Houlihan's patent in his independent claim **1** is similar to the application, only in the steps of forming oxide, nitride layers, removing oxide layer, and forming a gate oxide layer. Both of the ion implantation steps in his patent are done using resist masks – the first implant to form n- and the second implant to form p- wells, as his Figures 5 and 6 clearly show. In the current application, as shown in Figures 3 and 6, and as claimed in amended claim **1**, ion implantation is of the blanket type with no use of masks. The entire wafer is flooded with ion beam, with the first implant doping only the thickness of the pad silicon dioxide layer (25 Å - 120 Å) and the second blanket implant forming the deep n- or p- wells. Formation of the wells is facilitated by isolation trenches which serve as mask for the appropriate areas. Wells are therefore formed in the regions between the isolation trenches as shown in Figures 5 – 8 of the

current application. The formation of shallow blanket implanted pad silicon dioxide layer is key to minimizing the V_t variations of the device arising out of this pad oxide thickness variations during deposition, as shown in Figures 4 and 5. Since the tail of the implanted profile in the thin blanket implanted pad oxide layer extends into silicon (Figure 5), the tail will balance out any surface concentration variations of the deep implant. Table I shows the experimental data of i) V_t of 0.489 +/- 0.0327 volts without this sacrificial shallow implant of pad oxide versus ii) 0.522 +/- 0.007 volts with said shallow implantation.

We have reviewed the related prior art references made of record and note that none of these suggest the method presented in the claimed invention for improving the VT stability of the device with the use of a sacrificial shallow blanket implanted layer formed within the pad oxide.

Claims **1, 3 – 8** have been amended to overcome the Examiner's objections and rejections. All of the claims **1 – 8** and **9 – 16** are now believed to be in condition for allowance and allowance is so requested.

It is requested that should there be any problems with this Amendment, please call the undersigned Attorney at (845) 452-5863.

Respectfully submitted,

Stephen B. Ackerman, Reg. No. 37, 761